

Serial No.: 09/903,268
Group Art Unit: 2662
Examiner: Habte Mered

Amendment to the Claims

1 (Original). A method of controlling communications in a shared protection architecture, where first and second network elements support communications over a plurality of working channels of respective rings using a shared protection channel common to all of said rings, comprising the steps of:

responsive to an indicated span switch on a first ring, passing control information for said first ring over said shared protection channel while indicating availability of the shared protection channel to rings other than said first ring; and

responsive to an indication that the shared protection channel is needed to pass communications traffic for a second ring, ceasing to pass the control information for said first ring over said shared protection channel and indicating the non-availability of the shared protection channel to rings other than said second ring.

2 (Original). The method of claim 1, and further comprising the step of indicating a lockout of protection (L.OP) for any ring indicating a span switch while the span switch exist on said first ring and prior to said indication that the shared protection channel is needed to pass communications.

3 (Original). The method of claim 1 wherein said step of indication the non-availability of the shared protection ring comprises the step of generating a lockout of protection (LOP) on protection channels for any ring other than said second ring while said shared protection span is need to pass communications for said second ring.

4 (Original). The method of claim 1 wherein said step of ceasing to pass control information is responsive to an indicated ring switch on said second ring.

5 (Original). The method of claim 4 wherein said step of ceasing to pass control information is responsive to span switch on said second ring formed between said first and second network elements.

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6 (Original). The method of claim 4 and further comprising the step of generating a span switch signal on non-shared protection channels associated with said second ring.

7 (Original). A communications network using a shared protection architecture over a plurality of communication rings, each ring comprising one or more working channels for passing communications traffic, comprising:

first and second shared protection network elements supporting communications traffic over a working channels for a predetermined set of said rings using a shared protection channel, said first and second shared protection network elements including control circuitry for:

passing control information for a first ring over said shared protection channel while indicating availability of the shared protection channel to rings other than said first ring, responsive to an indicated span switch on a first ring; and

ceasing to pass the control information for said first ring over said shared protection channel, responsive to an indication that the shared protection channel is needed to pass communications traffic for a second ring; and

circuitry for indicating the non-availability of the shared protection channel to rings other than said second ring, responsive to an indication that the shared protection channel is needed to pass communications traffic for a second ring.

8 (Original). The communications network of claim 7, wherein said control circuitry further comprising circuitry for indicating a lockout of protection (LOP) for any ring indicating a span switch while the span switch exist on said first ring and prior to said indication that the shared protection channel is needed to pass communications.

9 (Original). The communications network of claim 7 wherein said circuitry for indicating the non-availability of the shared protection ring comprises circuitry for generating a lockout of protection (LOP) on protection channels for any ring other than said second ring while said shared protection span is need to pass communications for said second ring.

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10 (Original). The communications network of claim 7 wherein said circuitry for ceasing to pass control information is responsive to an indicated ring switch on said second ring.

11 (Original). The communications network of claim 10 wherein said circuitry for ceasing to pass control information is responsive to a span switch on said second ring formed between said first and second network elements.

12 (Original). The communications network of claim 11 wherein said control circuitry further comprises circuitry for generating a span switch signal on non-shared protection channels associated with said second ring.

13 (Original). A shared protection network element for use in a communications network using a shared protection architecture wherein communications traffic is passed over a plurality of communication rings, each ring comprising one or more working channels for passing communications traffic, and where a shared protection channel is used by the network element to protect a set of said working channels, comprising:

circuity for passing control information for a first ring over said shared protection channel while indicating availability of the shared protection channel to rings other than said first ring, responsive to an indicated span switch on a first ring;

circuity for ceasing to pass the control information for said first ring over said shared protection channel, responsive to an indication that the shared protection channel is needed to pass communications traffic for a second ring; and

circuity for indicating the non-availability of the shared protection channel to rings other than said second ring, responsive to an indication that the shared protection channel is needed to pass communications traffic for a second ring.

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14 (Original). The communications network of claim 13 and further comprising circuitry for indicating a lockout of protection (LOP) for any ring indicating a span switch while the span switch exists on said first ring and prior to said indication that the shared protection channel is needed to pass communications.

15 (Original). The communications network of claim 13 wherein said circuitry for indicating the non-availability of the shared protection ring comprises circuitry for generating a lockout of protection (LOP) on protection channels for any ring other than said second ring while said shared protection span is need to pass communications for said second ring.

16 (Original). The communications network of claim 13 wherein said circuitry for ceasing to pass control information is responsive to an indicated ring switch on said second ring.

17 (Original). The communications network of claim 16 wherein said circuitry for ceasing to pass control information is responsive to a span switch on said second ring formed between said first and second network elements.

18 (Original). The communications network of claim 17 and further comprising circuitry for generating a span switch signal on non-shared protection channels associated with said second ring.